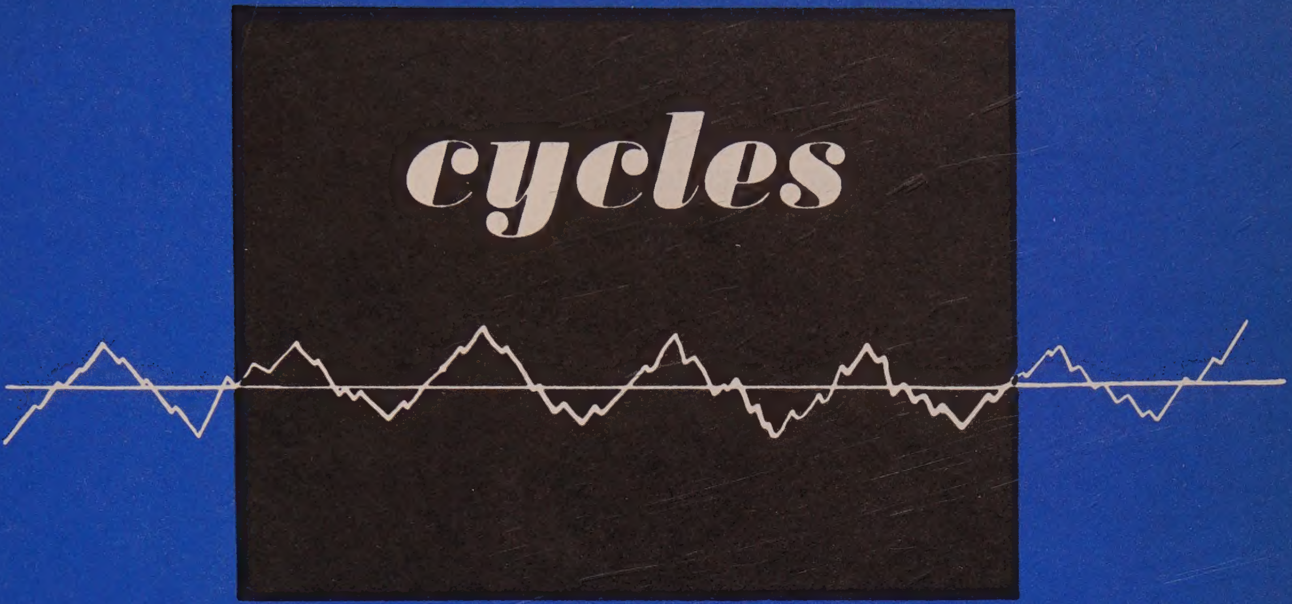

cycles

March 1957

FOUNDATION FOR THE STUDY OF CYCLES
New York, New York

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THE DIRECTOR'S LETTER

Dear Member:

My Trip

This letter is being written in California where I have been holding meetings of members from San Francisco to San Diego. We have 600 members in California. It has been a great pleasure to meet so many of them.

Of course I met as many members as I could in coming across the country. And I'll meet as many as I can as I return. I wish I could know *every single member* personally!

Encouraged

I am much heartened by my trip. Our members seem interested and appreciative. The college professors I have talked with are encouraging. Our committee members and advisors have been helpful. All in all we seem to be getting somewhere, even if a bit more slowly than sometimes I would wish.

Perhaps slow progress is to be expected. As Dr. D. T. McDougal said to me when I talked with him recently in Carmel, "I'm 92 years old. In all my life I never knew anybody who did anything worth while without the hell of a lot of work!" A lot of work takes a lot of time, so that perhaps explains why we don't go forward faster. However many people seem to think we are making very rapid progress indeed.

My Remarks

I have written down the substance of what I said at the various meetings. I am printing these remarks as the lead article in this issue of *Cycles*. If you were not able to get to a meeting, this article will give you some idea of what was said. Of course each meeting was different, but in a way they were alike, too.

How to Make a Cycle Analysis

Nine people at the San Francisco meeting and ten at the Los Angeles meeting said they wanted to buy the 23 lessons (600 pages) I wrote as text for the course. In view of this demand, I decided to publish them. They are for sale to any member who wants them. They will be called "How to Make a Cycle Analysis."

These lessons are as full and clear and complete as I knew how to make them. They start at the beginning and set down, as best I was able, everything I have learned in twenty years work in this field. They are illustrated by charts, diagrams, and blue prints. They are supplemented by printed material such as tables that you will find useful for reference.

I am making these lessons available to our members for $50 a set. *This price does not include correction of papers.* You may return the lessons in ten days and get your money back in full if you are not completely satisfied.

Incidentally, the lessons are better than they were originally because I am including in this edition copies of many letters we wrote to students of the correspondence course. These letters were to answer their questions or to point out to them where they were getting off the track.

Any money we make from the sale of these lessons will go into further research because, as you know, I serve the Foundation without pay.

The Journal of Cycle Research

I suggest that those of you who are seriously interested in the technical aspects of cycle research should also subscribe to the *Journal of Cycle Research.* It is a quarterly. It costs $4.00 a year. If you don't want to spend $4.00 yourself, get you local library to subscribe.

The Geisinger Indicator

Everywhere I went folks seemed interested in the Geisinger Indicator. I'm therefore devoting quite a little space to it in this issue. I hope the additional discussion will enable you to get more from it.

Publication Date Changed

You may have noticed that this issue reaches you a little late. We are deliberately changing publication date from the first to the middle of the month to give you another Geisinger Indicator figure. I hope you approve of the change.

1957 Postscript

The 1957 Postscript was crowded out of the February report by Tchijevski's article. It was crowded out of this report by my long talk, by the Beginner's Corner, and by the Geisinger Indicator story. It will be resumed with the April report.

The next chapter will have more to say about the 5.91-year cycle and will show you how it has come out since discovery. This cycle is especially important in prices.

The Beginner's Corner

I urge you to study the figures in which *you* are interested. The cycles are different in each sort of figures. And so is the basic underlying growth trend.

To help you to do this I am going to start a "Beginner's Corner." (See pages 75 and 76 of this issue.) This Beginner's Corner will discuss charting, trend, looking for cycles, etc.

Study of your own figures will not only help you to understand them better, it will help you to understand the magazine *Cycles* better. You will know better what I do if *you* have done it yourself.

Cycle study doesn't require any knowledge of mathematics beyond arithmetic.

So start today by charting your sales or production figures, or the prices of the stock or commodity that interests you, or the values of anything you want to know more about. Blank paper is provided on pages 84 and 85.

Cordially yours,

Edward R. Dewey

Director

CYCLES,

THE FOUNDATION FOR THE STUDY OF CYCLES,

AND YOU*

by Edward R. Dewey, Director
Foundation for the Study of Cycles

THE study of cycles is an effort "to get a little hindsight ahead of time," as one of our West Coast members put it recently. It has to do with any events which recur with reasonable regularity. Such events may be in nature, in business, or in anything else. The important thing about regularity is that where you have regularity you usually have predictability.

However, the study of cycles is much more than an effort to learn what is ahead. It is an effort to learn the reasons which cause the regularity. We must know *causes* if we are to understand and to master or adapt ourselves to our universe.

My Introduction to Cycles

Perhaps the best way to introduce you to the subject of cycles is to tell you about my own introduction to the subject.

My interest in cycles was first aroused in the early 30's at the time of the Great Depression. In September 1929, just a couple of weeks before the depression hit, I got a job with the Department of Commerce as Chief of Industrial Marketing. This job was in connection with the first Census of Distribution. Then, presently, they gave me the job of Chief of Current Statistics too. Then they loaded some other jobs on me as well. I had a staff of about 100 people and I had lots of fun.

In 1931 I was promoted and given the title, Chief Economic Analyst. My new job included liasison with economists, both inside and outside the government.

The Economists Disagreed

President Hoover wanted to know why we were having a depression. As liaison officer with economists it was one of my jobs to try to find out. I asked a great number of economists. However, all their answers were different! It's as if you were sick and one doctor said you had gout, the next said you had cancer, a third said you had leprosy, and a fourth said you had athletes' foot! If doctors disagreed about illnesses in this way you wouldn't have much faith in doctors. Economists disagreeing the way they did, I lost faith in economists. Twenty-five additional years of experience with them has done nothing to restore it.

The Behavioristic Approach

About this time I became acquainted with a man named Chapin Hoskins. Hoskins, too, had given up hope of learning the *why* from economists. But he said to himself, "Even if we don't know *why*, we can at least know *how*. For example, if we are interested in wheat prices we can study past price behavior of wheat. If, over a period of years, there has never been a decline of more than such and such a percent in a day (or a week or a month), it's unlikely that wheat will decline more than that much the next day (or week or month). If there has never been a decline of such and such a percent without a "correction" of such and so much, and if we have had a decline of these proportions, it is likely that a correction is in store for us, too. And so on."

---

*THE SUBSTANCE OF TALKS ABOUT CYCLES GIVEN AT MEETINGS OF MEMBERS OF THE FOUNDATION DURING JANUARY, 1957.

I call this the "behavioristic" approach to economics. We may not know cause, but we can know and study *behavior*. Study of this sort can be carried to great lengths. It is remarkably rewarding.

Mr. Hoskins Discovers Cycles

In the course of his studies as to *how* economic figures behaved, Mr. Hoskins noticed that every three months there was a slight upsurge in the bank debits of certain cities. That is, in these cities, every three months more and/or bigger checks were drawn. Mr. Hoskins had discovered a cycle!

Some Definitions

At this point some definitions may be in order. The word "cycle" comes from a Greek word meaning "circle." Actually, therefore, the word cycle means "coming around again to the place of beginning." Of itself the word does not necessarily imply any regularity of time between these places of beginning. When there is *reasonable regularity* the right word to use is "rhythm," from a Greek word meaning "measured time." The tides are rhythmic; your heart beat is rhythmic; so is your breathing. When there is *perfect regularity* the right word to use is "periodicity." However, the word "cycle" is often used interchangeably with "rhythm" and "periodicity." I have used it that way above.

More Cycles

Getting back now to Mr. Hoskins, he didn't know *why* bank debits had this three month cycle. He didn't need to know why. Every three months it happened. It was worth taking into account as a probability in trying to assess the future.

Presently Mr. Hoskins observed that, in some instances, every third one of his 3-month crests was bigger. He had, in other words, discovered a 9-month cycle. Some things had this 9-month cycle without having the 3-month cycle.

Mr. Hoskins then discovered other cycles.

This was getting interesting. The behavioristic approach was even more fruitful than Mr. Hoskins had dreamed in the beginning. Here was the possibility of forecasting *timing* and *turning points* as well as throwing light on probable future *levels*.

Westinghouse Becomes Interested

Several years went by. Mr. Hoskins began to make forecasts based on his knowledge of cycles. These forecasts came true. The possibility had become an actuality! Here indeed was something important.

As well as being something of a genius, Mr. Hoskins was a citizen of importance. He was a member of the Board of Directors of the American Management Association. The Executive Vice President of Westinghouse was also a member of the board. The Westinghouse fellow, whose name escapes me at the moment, was much impressed at the way these forecasts came out. He engaged Hoskins on a two-year retainer to teach Westinghouse all that he, Hoskins, knew about cycles. He detailed Frank Newbury, the Chief Designing Engineer (and now Assistant Secretary of Defense) to represent Westinghouse. He hired Professors Warren and Pearson of Cornell to pass upon the Hoskins techniques. Something was being done about cycles.

I Join With Hoskins

On the strength of his contract with Westinghouse Hoskins, in 1937, started in business as a consultant. I joined him as an associate. Hoskins was the brains of the combination, I was the legs. It was my job to dig up the business, Hoskins' to take care of it after it was in.

The arrangement reminds me a little of the story of the hod carrier. The hod carrier said, you remember, that he had a fine job. All he had to do was to carry bricks up six stories and the man up there did all the work.

Hoskins and I started in business on March 1st 1937.

"Sell Everything"

I remember our first day together. I had just bought a few shares of stock. I told Mr. Hoskins what I had done, and of the profit I hoped to make as the stock went higher. He said, "It won't go any higher. Sell everything you have at once. We are within a week of the top. If I had just a little more courage I'd go short with everything I've got." Sure enough, within a week the market did reach a top and the disasterous decline of 1937-1938 had begun.

Later that year, in August 1937 I think it was, after the market fooled most people by starting up again, I was in the office of a famous investment counsellor - a man who handled millions. I heard him tell a client "The decline is all over. Buy heavily." I knew from Mr. Hoskins and from what he had taught me about cycles that the worst part of the decline was ahead. I tried to tell the counsellor, but he wouldn't listen. I've often wondered if he didn't later wish he had! You will remember that from August of 1937 to April of 1938 the Dow Jones Industrials fell from 184 to 113, a decline of 39%.

Too Much Business

Presently I got Mr. Hoskins more work than he could attend to. He still has some of those clients I got him during the period 1937-1940. I then had to do some of the consulting work too.

The cycles were certainly there, but why?

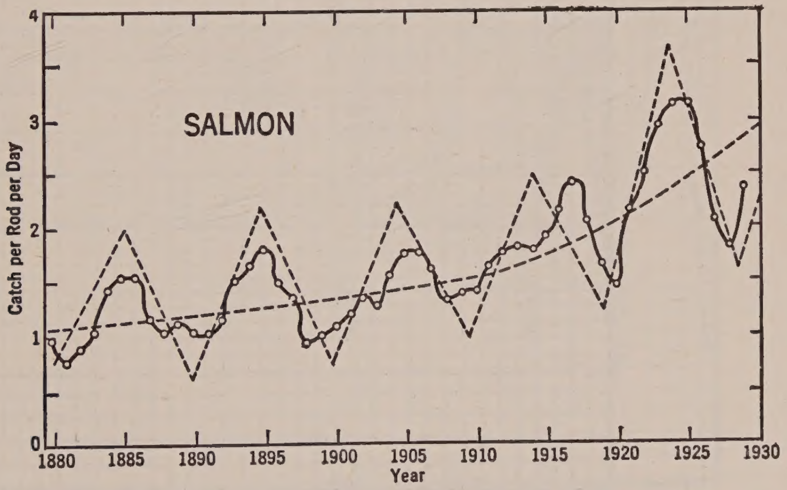
Back to 1931 Again

Let's now put a pin in this story and go back nine years to 1931 again.

At the exact time in 1931 that I was trying to find out for President Hoover why we were having a depression, a Boston financier named Copley Amory had organized a conference of biologists to be held at his summer estate at Matamek, in Canada. This two-week long meeting constituted the world's first International Conference on Biological Cycles. It drew biologists from various parts of the world to compare notes in regard to cycles of wildlife.

The Salmon Cycle

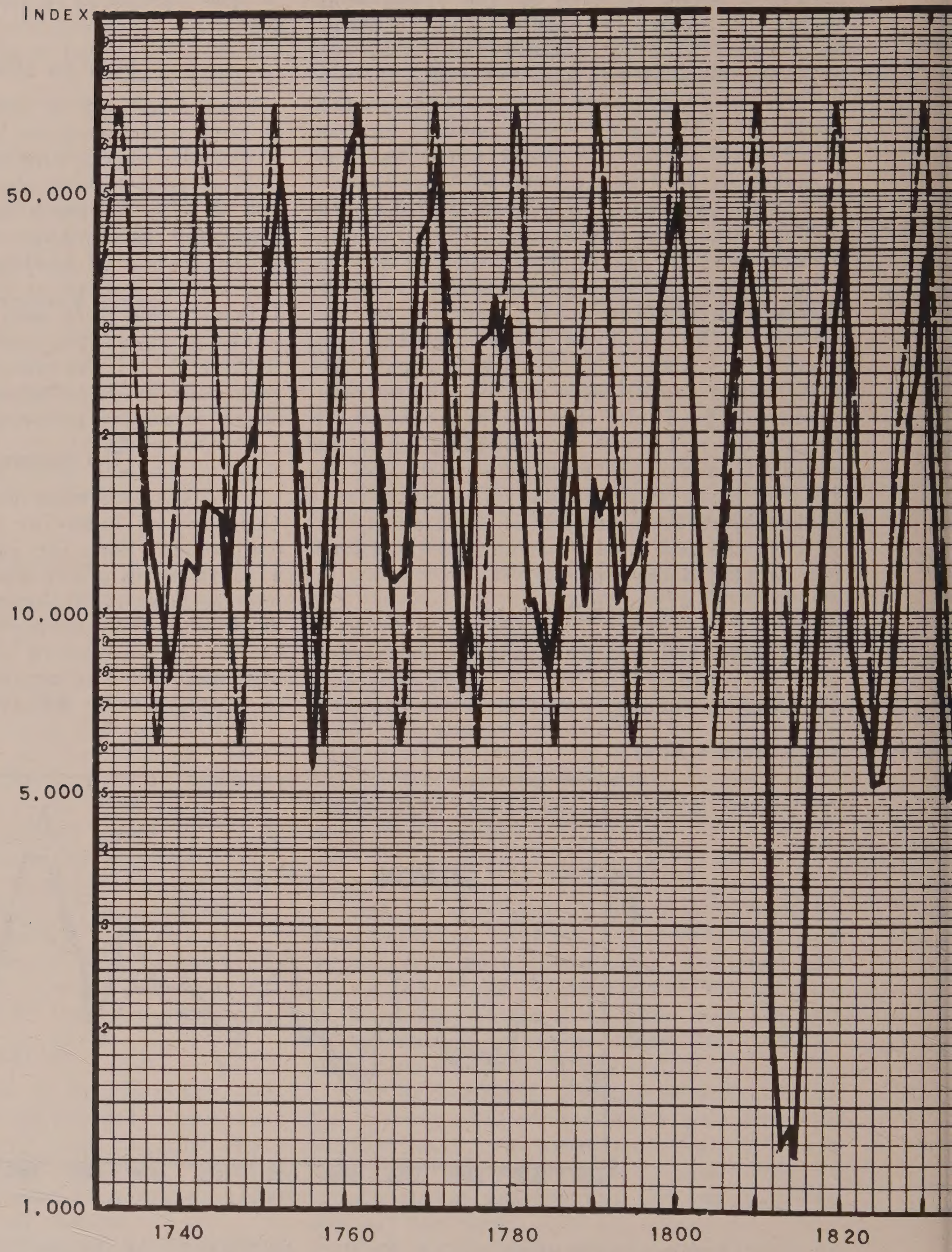
I'd like to show you some examples of the sort of behavior considered at this conference. Here for instance in Fig. 1 is a chart showing the abundance of Atlantic salmon from 1880 through 1929. The curve represents the average catch per rod per day by the members of an exclusive fishing club that owns an entire river (initiation fee is said to be $35,000). You notice that



THE 9 2/3-YEAR CYCLE IN THE ABUNDANCE OF ATLANTIC SALMON

Catch per rod per day on the Restigouche River, Canada, 1880-1929, smoothed by a three-year moving average (after Phelps and Belding), together with a regular 9 2/3-year cycle.

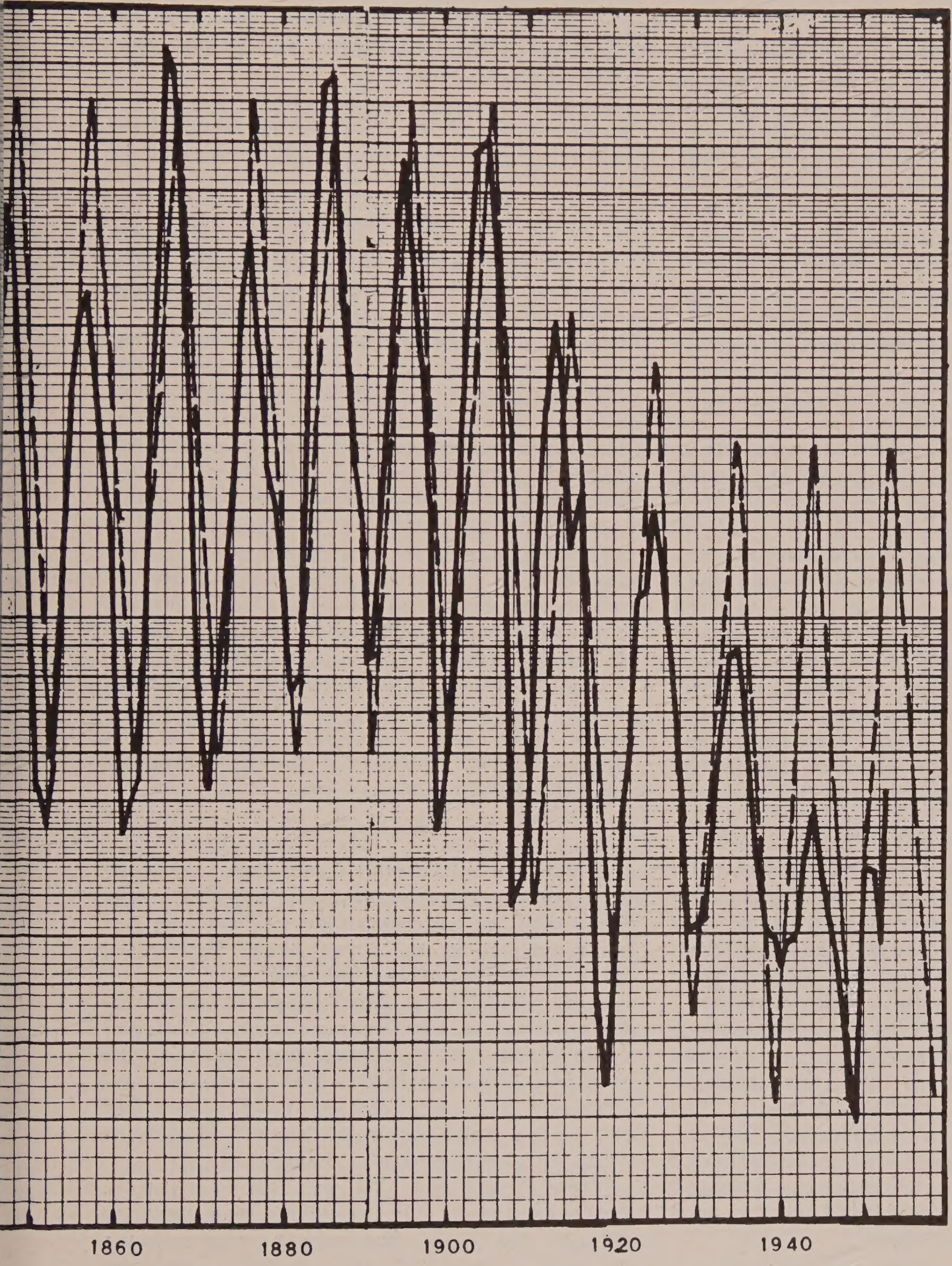
THE 9.6-YEAR CYC



THE 9.6-YEAR CYCLE OF

The heavy line shows the relative number of lynx skins offered to
been made for a discontinuity between 1820 and 1821 due to the merger of
The broken zigzag line diagrams a perfectly regular 9.6-year cycle. (Ra
Note that the cycle has repeated 22 1/2 times. This cycle was first obs

OF LYNX ABUNDANCE,



ABUNDANCE, 1735-36—1953-54

son's Bay Company year by year for the past 219 years. Adjustment has
on's Bay Company and the North West Company.
e)
out 1884. It has repeated 7 times since discovery.

the curve showing the abundance of fish increases and decreases rhythmically across the page in a cycle that averages 9.6 years from crest to crest or from trough to trough. The broken line diagrams a *perfectly* regular 9.6-year cycle—a 9.6-year periodicity—for comparison.

Of course, this regularity *could* be mere happenstance. You often find cycles that have no particular meaning. In fact you can even find cycles in random numbers, but of course such cycles do not continue. Not every cycle gives you predictability.

The Lynx Cycle

Fig. 2 shows you the same 9.6-year cycle in the abundance of lynx--Canadian wild cats--from 1735 to 1955--a period of 220 years. See pages 64 and 65.

Like the Atlantic salmon record, this chart, too, shows the catch—in this case the relative numbers of lynx pelts offered to the Hudson's Bay Company. However, except for one or two instances in the early years where the Indians were decimated by small pox, there is very close correspondence between the lynx catch and the abundance of the animals in the natural state.

The chart showing the abundance of lynx illustrate behavior that cannot, by any stretch of the imagination, be thought of as the result of chance. If the regularity is not chance, what causes it?

What Causes It?

Your first thought is that it must be something within the lynx population itself. Perhaps an overabundance of lynx that leads in some way to racial self destruction. Or perhaps scarcity stimulates fecundity in some way as yet unknown. Or perhaps the behavior illustrates a preditor-prey relationship of some sort in which the lynx eat up their food supply, then die off from starvation until the food supply has had an opportunity for recreation. This conjecture is reinforced when you learn that the snowshoe rabbits on which the lynx largely feed also have a 9.6-year cycle of abundance.

A Theory Dies

But alas for a fine theory! We have forgotten that the Atlantic salmon also have a cycle of this same length. The identity of wave length cannot easily be an accident. Moreover, the calendar timing of the two cycles is approximately the same, thus further suggesting some sort of connection. Yet lynx do not eat salmon, nor do salmon eat lynx.

Could the two cycles have a common cause—or shall we pass the matter off as mere coincidence—curious perhaps, but of no significance?

Other 9.6-Year Cycles

Before we try to answer this question, it may be well to ask where else this cycle has been observed. It is recorded with varying degrees of regularity and over various periods of time in the abundance of cross foxes, fishers, lynx, martins, muskrats, hawks, owls, partridges, rabbits, red foxes, ruffed grouse, silver foxes, and wolves in Canada; in the abundance of tent caterpillars in New Jersey; in the abundance of chinch bugs in Illinois; in the incidence of human heart disease in New England; in the acreage of wheat planted and wheat harvested in all of the United States; in the amount of atmospheric ozone at London and at Paris; and in rainfall in India. In all these things, as nearly as we can measure it, the length is 9.6 years from crest to crest; moreover the crests—and of course the troughs—come at approximately the same time.

A Common Cause?

All these different things can't reasonably vibrate together for no reason at all. There must be a common cause. Shall we say the something in the atmosphere? That's it. Let's blame it on the weather!

This would be a reasonable assumption. Perhaps it is the correct one. However, even if it is, we have but pushed the problem back a step. What causes the imagined 9.6-year cycle in weather? And why do we also seem to have a 9.6-year cycle in certain solar phenomena?

"Ah!" you say, "I see. It's simple. Sunspots affect the weather, the weather affects the lynx, the rabbit, the salmon, the bugs, the wheat, the farmers, and the human beings with heart disease. Perhaps it's the ozone in the atmosphere that does all this." That too is a fine theory except for one very uncomfortable little fact. That fact is, if there is a 9.6-year cycle in the sun (I'm not yet completely convinced) it crests *after* the 9.6-year cycle here on earth. We can't very well have the cause *following* the effect, can we?

Another Theory Killed

There is another reason why it is hard to believe that the sun affects something in the weather and that weather in turn somehow affects life on earth: There are many other cycles on the sun in addition to the 9.6-year one.

If the sun affected some aspect of weather—let us say the ozone content of the air—you would expect the ozone content to fluctuate in response to all these other cycles too. Ozone couldn't reasonably select the 9.6-year cycle alone to respond to. But even if it did, there is still another fact to confuse us. That is, the 9.6-year cycle is only one of dozens, perhaps hundreds, of cycles that we find running through the webb and woof of terrestrial affairs. Some are even better substantiated than the one I have been speaking of. What would cause *them*? No. the sun cannot reasonably be the cause of our cycles.

A More Fundamental Cause?

Could it be that the cycles on *both* the sun and on the earth are results of some still more obscure causative factor? In the present state of our ignorance we do not know, but there are reasons for suspecting that this may be the case.

Permanent Committee Established

It was facts and speculations such as these that occupied the scientists at Matamek in Canada at the 1931 conference. They compared notes and theories regarding cycles in the abundance of some 70 different sorts of animals, as one can read from the index of the verbatim proceedings of their two-week-long session. Their discussion did not answer many questions, but they did glimpse the magnitude and the importance of the problem. They established a permanent committee to deal with it.

Unfortunately they did nothing to implement the committee and it remained dormant until 1940.

Now let us tie the two strands of this story together.

A Library Visit of Importance

One Saturday in 1940 I went to the library to see if anybody had ever written anything about regularly recurring cycles. As long as cycles had become my work I thought it behoved me to learn as much as I could about them.

I couldn't find out much about regularly recurring economic cycles, but I did find a report by Professor Ellsworth Huntington of Yale telling about the Matamek Conference. I learned from this report what is known to every sportsman, namely that game is sometimes plentiful and sometimes scarce. I learned further, that the periods of abundance (and of course of scarcity) often come at amazingly regular time intervals.

Astronomical Cycles

About the same time--perhaps on the very same library visit, I do not remember--I learned of the cycle work of C. N. Anderson of the Bell Telephone Laboratories. Anderson had discovered that sunspots act as if they were influenced by a variety of cyclic forces similar to those that Mr. Hoskins and I had been discovering in business figures and to those about which the biologists had been comparing notes in wild life abundance. Cycles in business! cycles in wild life! cycles on the sun! And, in many instances these cycles had *the same wave length and crested at about the same time.* Here was something deeper and more profound than I had realized. Here was something fundamental. Here was a mystery that could be solved, if at all, only by tying together economics, biology, astronomy, and perhaps several other sciences as well.

I happen to be a person of action. I wrote Mr. Amory, the chairman of the committee of the biologists. He soon came to see me.

Foundation for the Study of Cycles Formed

Mr. Amory was as surprised to learn about the economic and astronomical cycles as I had been to learn about the astronomical and the biological. He saw at once that we had here a basic scientific problem of great importance, and one that needed to be attacked on a broad front. He and I decided that a new organization should be formed. We agreed upon the name *Foundation for the Study of Cycles*. I induced Mr. Amory to become Chairman of the Foundation. We re-organized the Permanent Committee set up at Matamek and took it over as the board of directors of the Foundation. Mr. Amory gave the Foundation $500 to get started with. We were afloat. I was "hired" as Director. It has been my job ever since, with the help of our members, to keep it afloat.

The Directory

One of the first things that Mr. Amory suggested was a Directory of living scientists who had contributed to the fund of knowledge in respect to cycles, rhythms, and periodicities.

In the process of compiling this directory I learned that some 36 different branches of science were concerned with cycles. These include astronomy, astrophysics, terrestrial magnetism, sedimentary geology, volcanology, seismology (earthquakes), climatology and meteorology, botony, dendrochronology (science of tree ring dating), forestry, agronomy, medicine, mammalogy (science of mammals, or what most of us call "animals"), ictheology (fishes) limnology (fresh water organisms), entomology (insects), ornithology (birds), herpetology (snakes), bacteriology, oceanography, hydrology, paleontology, physiology, sociology, anthropology, economics, physics, history, and several more that I'm not able to think of at the moment. We also learned that perhaps 3,000 scientists the world over had written about rhythmic cycles of one sort or another and that hundreds of these men were still alive. We saw that if all this work were to be co-ordinated, we would have the basis for a new science—the science of cycles.

Advisors

At the request of Professor Huntington—until his death a member of our board—many of the leading scientific societies appointed advisors to the Foundation. If we had the money to keep in contact with them, they could be of great help to us.

Finance

This is a good place to speak of money and how the Foundation is supported.

At the beginning we financed ourselves by conducting research in respect to cycles for various industrial firms. This worked out all right financially. For a time I was able to draw a salary. However, it had serious disadvantages from the scientific standpoint. First, the companies for whom the work was done usually wanted to keep the results secret. Second, the time spent in selling and in doing research for the companies kept me from learning much about cycles.

Eventually we hit upon the idea of financial support from lay members who shared our curiosity about the cause of cycles, who understand the importance of our inquiry, and who wished to support it financially. That is the way we are supported today.

The Membership Plan

Speaking roughly, it costs about $23 to find two new members. It costs about $6 to service them for a year. From them we take in $20. Thus, on the two, we lose about $9 the first year. However on the average one of these two members renews. His $10 pays the $4.50 we lost on him and the $4.50 we lost on the man who did not renew. Servicing him for a year costs. $3. This leaves only $1.00 deficit by the end of the second year for every two members we start out with. However, we get our printing done this way as part of the expense. Otherwise nothing could be printed.

Then too, a few generous souls who have my undying gratitude, send in more than the minimum of $10 a year. All of this excess goes into research, in addition to what is left over from the regular members. Money for research comes *only* from our members.

I contribute my time for nothing, but I don't deserve any special praise for this. I'd certainly take a salary if there were any money with which to pay it. I mention the matter only because I want you to know that when I ask you to renew if you can possibly afford it and to contribute all you can in addition for the benefit of the research fund, I am not asking anything for myself, Every cent you pay will go for operating expense, printing, and learning more about cycles.

It's Up To You

The time that I contribute is worth about $15,000 a year. I give it because I think a knowledge of cycles is *essential* if we are ever to understand and eliminate wars and depressions. If you feel the same way about it and want to help the work along, anything you care to give--from a dollar to a million--will be most gratefully received.

I happen to have enough put by so that my wife and I can live, if we are very careful, for the rest of our days. However, I do not have *any* money that I can use to operate the Foundation. If your renewals and contributions fall off, we will fold up immediately. Therefore, in final analysis, this whole program is up to YOU. This being so, if the support of the Foundation isn't your responsibility, whose responsibility is it?

The Program

I have said that the program is up to you. What *is* the program? Basically, it is (1) *to collect* as many examples as possible of rhythmic fluctuation in all fields of natural and social science, (2) *to measure* each of these rhythms with the greatest possible accuracy, (3) *to record* the latitude, longitude, wave length, wave shape, timing, and strength of each cycle in such a way that any qualified worker can reproduce the work and obtain the same results, and so that he can, if he wishes, take issue with the methods use by the worker to isolate, definitize, and evaluate the cycle, (4) *to stimulate* and help others to do these same things, (5) *to print* the results of all this research, (6) *to arrange,* collect, catalog, and group the cycles thus discovered and definitized, (7) *to discover the laws* which govern the operation of cycles, and (8) *to deduce the cause* or causes of cycles.

The job of doing all this is considerable because such a large number of cycles need to be studied before the more important laws and interrelationships will emerge. It's something like the isolation of any rare element--gold for example. Tons of gold bearing ore need to be mined in order to produce a few ounces of gold. Similarly, hundreds of series of figures need to be studied to find enough examples of various cycles to permit the formulation of adequate laws.

You remember the remark of the famous British physicist Tyndall. Tyndall said, "An idea in an empty head has the time of its life. It can rotate in any orbit it chooses without having any facts to bump into." It takes a lot of facts to keep from developing half baked theory.

I am frequently asked, "What are you really trying to do?"

I'll answer this question with a little story and then I'll stop talking. Many years ago when talking with my mother about cycles, I used the phrase, "I think..."

She interrupted me. "It's not enough, my son, to say, "I *think.*" I shall not be satisfied until you can say, "I *know.*"

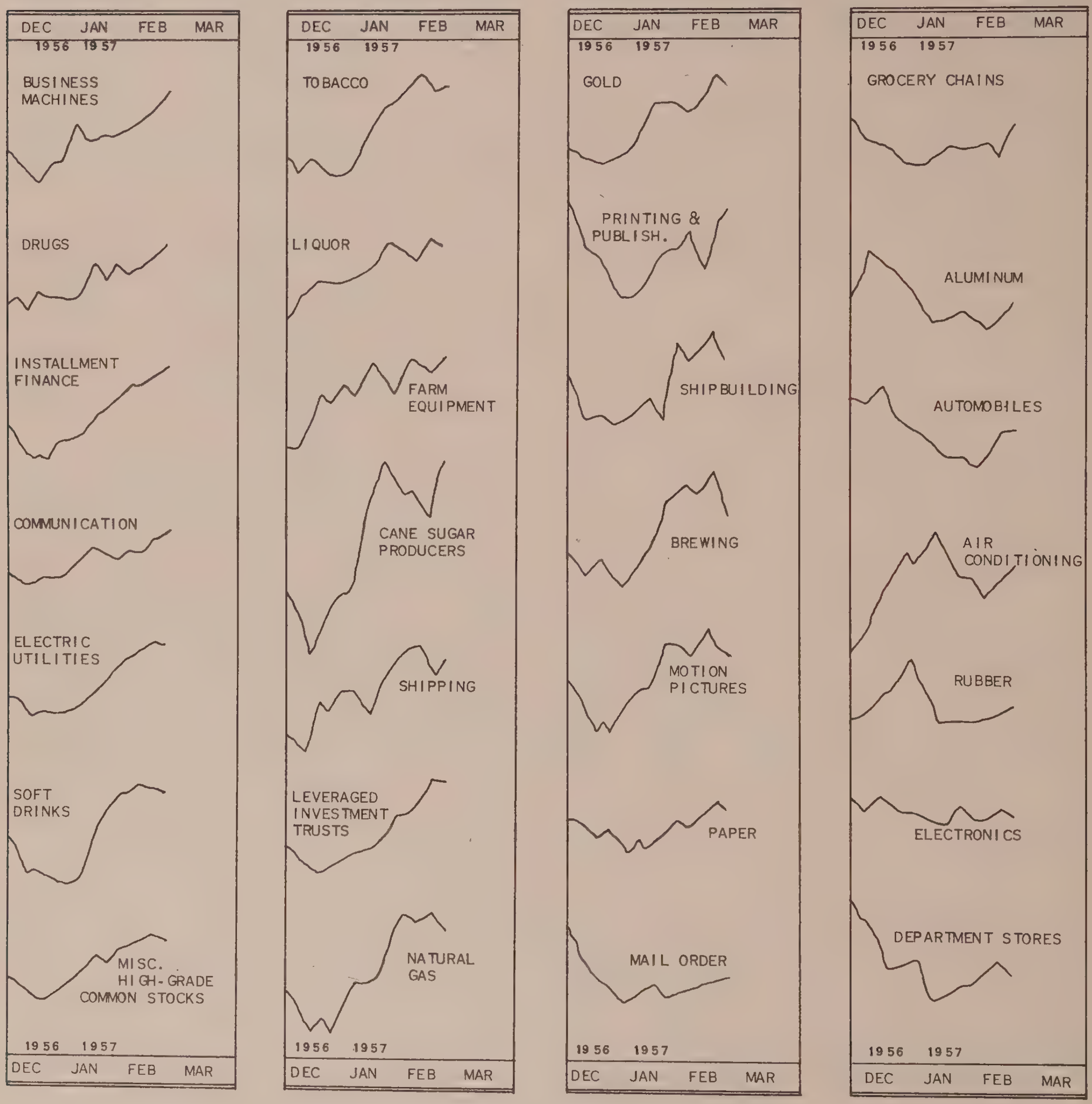
In a nut shell, that's what we are attempting to do: In respect to cycles, TO KNOW! For this job we need your help and support, moral, mental, and financial.

THE CYCLES IN EACH THING ARE DIFFERENT!

WE need to be reminded constantly that each series of figures behaves differently--each acts as if it had its own set of cycles.

Of course many of the cycles are present in many different things, but they are present in different combinations and in different proportions. It's something like

RELATIVE STRENGTH TRENDS OF MAJOR INDUSTRIAL GROUPS AND GENER



These charts have been traced from semi-logarithmic grids permitting direct comparison of subjects. In reading these charts it should be remembered that the *words*. We have only 26 letters but they combine into hundreds and thousands of words--all different.

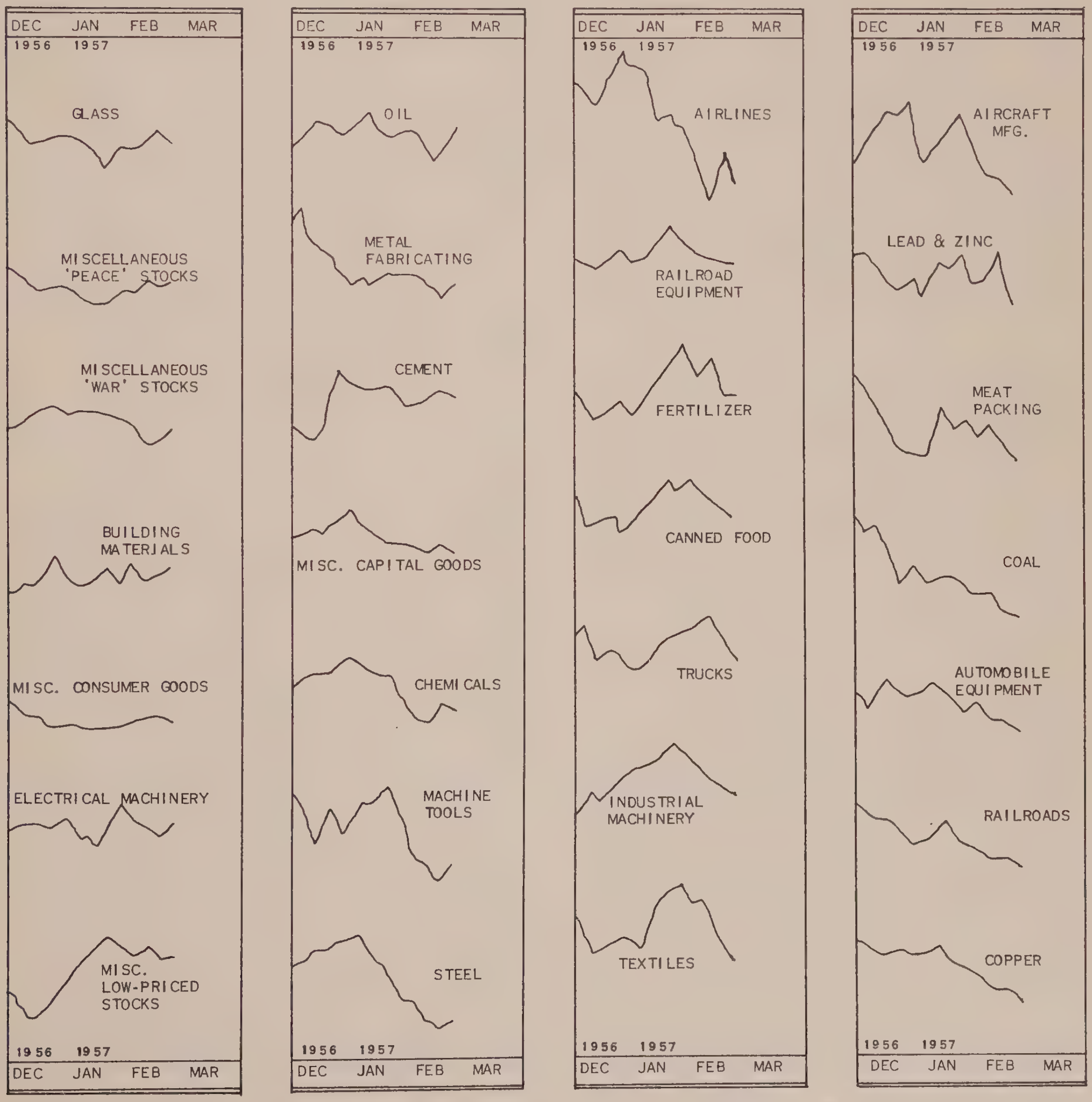
To emphasize how differently different things behave, I am printing below some charts showing the recent behavior of 56 different groups of stocks.

These charts represent the *percentages* by which the particular group is above or below the market as a whole.

Commodity prices, sales of individual companies, or almost anything else would have differed similarly.

These charts were issued by Mr. E. S. C. Coppock, of Maverick Building, San Antonio, Texas, as part of his regular TRENDEX service to clients. The charts are reproduced with his permission.

ASSES OF COMMON STOCKS DURING A THREE MONTHS PERIOD.



trend of the general market is to be considered as a horizontal line starting where each group trend intersects the left vertical line.

Letters

Too Many Letters

Dear Mr. Dewey:

I have your undated and unaddressed (out here they would call it "un-personalized") letter of solicitation.

I too am interested in cycles—in this case the type of cycle whereby one gets these letters although already a subscriber. Mr. X..... has his letters "personalized" with "Office of the President" etc. on the envelope so it is easy to consign to the wastebasket without opening. Your first one fooled me but I think I'll be ready for nos. 2 to infinity.

I subscribe to Cycles because your original solicitation was the first and only market (or related) publication that did not offer a crystal ball with built-in electronic reception plus 200 easy ways etc., etc. You know.

Now you know and I know why I'm still getting letters. What you have to figure out is how to stop the solicitation outfit from sending them to your subscribers.

Yours truly,
J. E. Forbes

Redlands, California

In Reply I Said:

Dear Mr. Forbes:

I enjoyed your letter of January 31 immensely. It raises a real problem. Maybe you or some other member of the Foundation can help us solve it.

We lose about 3,000 members a year; some resign, some are dropped for failure to pay dues, some die, and a large number move without leaving any forwarding address.

To replace these 3,000 members, we send out 300,000 letters because it takes about 100 letters to get 1 new member.

300,000 letters a year is something over 1,000 letters every working day or 5,000 to 10,000 a week. These letters are sent to people whose names we buy from list brokers who get these names from goodness knows where. Some of these names, of course, like yours, belong to people who are already members of the Foundation.

What we do is this: We have a girl with a marvelous memory, Mrs. Dora Pearson, who has memorized the names and in a general way the addresses of all of our 6,000 members. Every week she goes over the 5,000 or 10,000 envelopes that are addressed by the list broker for that week's mailing and attempts to pull out any envelopes addressed to any of our members. In the course of a year she pulls out hundreds and hundreds, perhaps thousands.

Her task is complicated by the fact that every month we have about 250 new members come in whose names have to be memorized and 250 old members who drop out whose names do not have to be pulled. She has to memorize these changes, also.

Her task is complicated by the fact that we have an enormous number of address changes. These sometimes run as high as a 100 a week. She has to keep these in mind too because we often find the same name in different parts of the country. Mr. John E. Forbes of Redlands is a member, but Mr. John E. Forbes of Chicago is a prospect, unless, through an address change, they are both the same man.

Now in your case, the trouble was that in going over 10,000 names during one of the recent weeks in order to pull all of the envelopes addressed to any of the 6,000 members we happened to have during that particular week, she slipped up. She failed to pull and destroy the envelopes addressed to *you* by the list broker.

The question is, therefore: What should we do to her?

Cordially yours,

P. S. If you do get another letter from us, *please* open it. It might be a bill!

What Constitutes a Cycle?

Dear Mr. Dewey:

In the literature on cycles I have not observed a clear and definite definition of what constitutes a cycle.

Between 1910 and 1920 there were a couple of sharp ups and downs in the market. Between 1932 and 1942 there were two sharp up and down movements in the market, although the market was mainly below its long time trend in the period. Does the movement between 1932 and 1936 constitute a cycle?

On page 12 of your January issue you give some percentages as representing the strength of cyclical movements. Do the percentages represent variations from trend? You can't very well understand what is being said if the writer uses terms that are not defined and not generally understood.

You will note that my questions relate to stock market cycles.

Very truly yours,
Spurgeon Bell

New York 25, New York

In Reply I Said:

Dear Mr. Bell:

From time to time I have published a glossary page giving definitions. I am publishing it again in this issue. I hope that it will be of use to you.

Although any *round trip* up and down movement constitutes a cycle in the broadest sense of the word, the kind of cycles we deal with are *rhythmic* cycles—that is, a series of waves that *repeat* with reasonable regularity. The fact of the regularity is usually indicated by a prefix indicating the length of the time interval from top to top or from bottom to bottom; for example, a 3-year cycle, a 4-month cycle, etc., etc.

Answering your second question, the percentages do, as you say, report variations from trend.

Cordially yours,

Four Questions

Dear Mr. Dewey:

1. Has anyone ever used the cycles successfully in pursuing a definite end?

2. If a person wished to use the stock market synthesis how would he figure out the timing of when to sell and when to buy, particularly in view of the coming change in trend?

3. Of what use is the Geisinger Indicator?

4. Are there any charts showing real estate cycles, that is, when values are high and low? Do these cycles coincide with those of the stock market? Are there cycles showing the fluctuations of volume in real estate sales?

Sincerely,
C. W. B.

Oakland 18, California

In Reply I Said:

Dear Mrs. B....:

1. Good gracious, yes! From the time of Joseph to the present time we have used a knowledge of cycles. Joseph acted on knowledge of a 14-year cycle (7 good years to be followed by 7 bad). People have predicted all sorts of things by knowing the cycle involved.

2. One shouldn't use the synthesis of stock market cycles alone for operating in the stock market. There are many factors that need to be taken into account in addition to cycles. However insofar as cycles govern, the time to buy is when the *combination* of cycles is at trough. The time to sell is when the *combination* of cycles is at peak.

Let me emphasize again that some stocks are going up as other stocks are going down. In speculating each stock must be studied separately.

3. In the past the Geisinger Indicator has given forewarning of upward and downward moves of the Federal Reserve Board Index of Industrial Production. Industrial production is the best measure of general business activity. The Geisinger Indicator is of interest to those who want to know whether business is going up or going down.

4. We have a great mass of material in regard to real estate prices, real estate sales, real estate transfers. All these figures show evidence of cycles of one length or another. We have published a number of charts of this sort. We plan to publish more in the future.

Cordially yours,

GLOSSARY

Cycle, coming from a Greek word meaning circle, implies coming around to the place of beginning. Strictly speaking, in the word itself there is no necessary implication of regularity, but the word is often used loosely to denote rhythm or periodicity.

When the word cycle is modified by a time interval such as 6-year cycle, 20-month cycle, 17-day cycle, the phrase usually means a cycle that recurs with reasonable regularity. In other words, it denotes rhythm.

Rhythm, coming from a Greek word meaning measured time, implies a beat, or a tendency toward perfect regularity or periodicity. It is what we really mean on most of the occasions when we use the word cycle.

Cycle analysis, as we are using the term in this bulletin, should really be called rhythm analysis, as we are concerned with **rhythmic cycles**--cycles that recur with a beat.

Periodicity, in the strict sense, is the quality of being regularly recurrent. It is a quality not often found in nature. The ideal cycles which are often added to a chart to diagram a rhythmic cycle are true periodicities.

A **wave** is one single cycle or undulation. Waves have **frequency**, **amplitude**, **period**, and, at least when they represent harmonic curves, **phase**.

Frequency is the number of complete vibrations to and fro--i.e. waves--per second It is a term not used by cycle analysts when dealing with cycles that are over a second in length.

Amplitude is the extent of a vibratory movement measured from the average position to an extreme position; that is, it is the height or depth of the wave above or below the axis around which the wave oscillates.

Positive amplitude is the distance above the axis, **negative amplitude** is the distance below the axis, **overall amplitude** is the sum of the positive and negative amplitudes. Amplitudes may be expressed in absolute units or as a percentage of the value of the axis.

Period is the interval of time required for a periodic motion to complete a cycle and begin to repeat itself. It is the length of the wave from crest to crest or trough to trough or from some other point on the curve taken as the **epoch**. The **epoch** is the point on the curve chosen as the beginning of the wave. In physics and astronomy it is usually taken as the point where the curve crosses the axis on its upward motion, but it may be any other point as well.

Phase, in a simple harmonic curve, is the point or stage in the period to which the oscillation has advanced considered in relation to a standard position or assumed instant of starting. It is measured along the axis, usually in degrees. By extension of meaning, **positive phase** is therefore the part of the wave above the axis or trend, and **negative phase** is the part of the wave below the axis or trend. When the crests (or troughs) of two or more different series of waves come at the same time, the waves are said to be **in phase** with each other. When the crests of one series of waves coincide with the troughs of another series, the series are spoken of as in **reverse phase**.

A **simple harmonic curve** referred to once or twice above, is the curve you would get by tracing the motion of a pendulum upon a piece of smoked paper that was moving at uniform speed at right angles to the direction in which the pendulum was swaying back and forth. It is perfectly simple, regular, and symmetrical and, in mathematical study, is usually referred to as a **sine curve**. A single oscillation is called a **sine wave**.

A **rectilinear** or **saw-tooth wave**, on the other hand, is a wave the sides of which are straight lines; in other words, zigzag.

Trend is the tendency of data in a series to increase or decrease during a long period of time. The expression, "a long period of time," cannot be defined except relatively. If you are dealing with hourly figures, you might consider trend as the general direction over the past 30 or 40 hours. With yearly figures "trend" might mean the general tendency over the past 100 years or more.

An **average** is a typical value which tends to sum up or describe a number of figures. There are at least five different kinds of averages commonly used by statisticians; but the one which ordinary folk think about when they hear the word **average** is the one computed by adding all the items together and dividing the total by the number of items. Thus, if we have four items, 10, 12, 11, and 13, the average of these items is 10 + 12 + 11 + 13 (46) divided by 4, or 11½. An average of this sort is more accurately called the **arithmetic mean**.

An arrangement of numbers is called a **series**.

When the numbers with which we deal represent events which occur one after another in time, the arrangement is called a **time series**. Thus, in the example above, if 10, 12, 11, and 13 represent the price of cotton for each of four consecutive years, or represent the number of accidents on each of four consecutive days, you would call the numbers by this name--a time series.

You could still average the numbers and say, for example, that the average price for all four years was 11½ cents, or that during the period there was an average of 11½ accidents per day, as the case might be.

You could also say that the average price for the first three years was 11 cents, (10 + 12 + 11 (33) divided by 3) and that the average price for the last three years was 12 cents (22 + 11 + 13 (36) divided by 3).

A **moving average** is a succession of averages secured from a series of numbers by dropping the first number (item) in each group averaged and including the next number in the series after the group, thus obtaining the next group to be averaged, and so on.

Thus, when you averaged the first three numbers of our time series (10, 12, and 11) and got 11, and then dropped the first number (10) and added the fourth number (13) and averaged again and got 12, you were constructing a moving average

Because you were averaging three items at a time, you would call the result a 3-item or 3-term moving average. If the items represented yearly values you would call the result a 3-year moving average. If the items represented daily values, you would call the result a 3-day moving average.

The **moving total** is the series of successive totals from which the moving average is computed. For example: When , above, you added 10, 12, and 11 to get 33, and then added 12, 11, and 13 to get 36 (as a step in the task of getting 11 and 12, the two terms of the moving average), you were computing a moving total.

THE BEGINNER'S CORNER

ARITHMETIC LINE CHARTS

IF you want to study cycles in your business or in anything else, one of the first things to do is to make a *chart* to show how your sales, or your prices, or whatever else you are interested in, went up or down from day to day, from week to week, from month to month, or from year to year. A **chart** is merely a diagram to show graphically the interrelationships between the various values with which you are concerned.

There are many kinds of charts, but in cycle study we mostly use what are called *line charts*. A **line chart** shows you how your figures increase or decrease over a period of *time*. Almost all charts printed in the magazine *Cycles* are line charts.

A line chart consists of a *grid* and one or more *curves,* and of course the *scales*.

The **grid** is the background of criss-cross lines on which you plot your *points*. Your **points** represent the values of your *data* for each time interval—day, week, month, year.

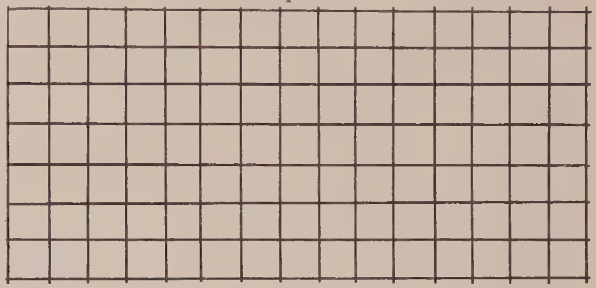
(The word **data** is the plural of the word datum. It means fact. Your *data* are therefore your facts, expressed in numerical form—they are the numbers you wish to study.)

The **curve** is the line you get when you connect your successive points by straight lines.

Grids

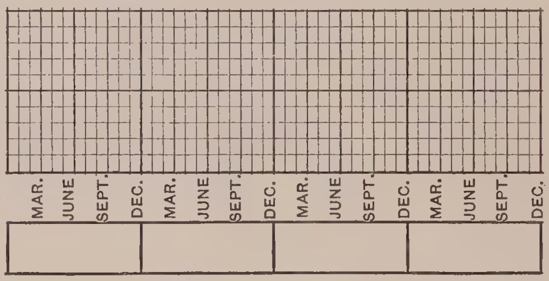
Now let's talk about *grids*—the criss-cross background for your curve. There are many kinds of grids, but the kind I want to talk about today is the plain ordinary grid known to everybody. It is the one where the up and down lines are all the same distance apart—so are the lines running across the page. It's called the *arithmetic grid,* and paper printed with a background of such lines is called arithmetic chart paper, or chart paper with arithmetic ruling, or arithmetic paper.

Here are some samples:



Plain cross section rule. This sample has five lines to the inch, both horizontally (across) and vertically (up and down).

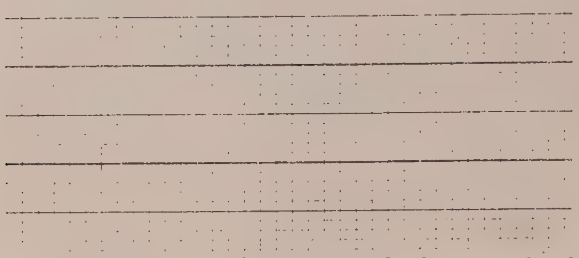
Ruling of this sort is good for many kinds of charting.



Monthly rule. Every third vertical line accented; every sixth vertical line accented more; every twelfth vertical line accented still more. Horizontal lines also spaced equal distances apart, every fifth one accented, every tenth accented more. Note that vertical and horizontal spacing is not the same.

This ruling is good for charting monthly figures.

I've printed a whole sheet of this paper for you on page 85 of this issue so that you can chart the monthly values in which you are interested.



Polypurpose rule. None of the vertical lines accented. Every fifth horizontal line accented; every tenth horizontal line accented more.

This ruling is good for charting daily, weekly, and annual figures. It can also be used for monthly figures.

I've printed a whole sheet of this paper for you on page 84 of this issue so that you can chart your daily, weekly, or annual figures.

Arithmetic chart paper can be bought at any good stationery store--often even at a 10¢ store. Or write direct to a manufacturer. Codex Book Company, Inc. of Norwood, Massachusetts or Keuffel & Esser Company of 127 Fulton St., New York City, both have good selections. Send to one or the other for a catalog.

Scales

It is an accepted convention that distance across the page represents time; up and down distance represents value or quantity.

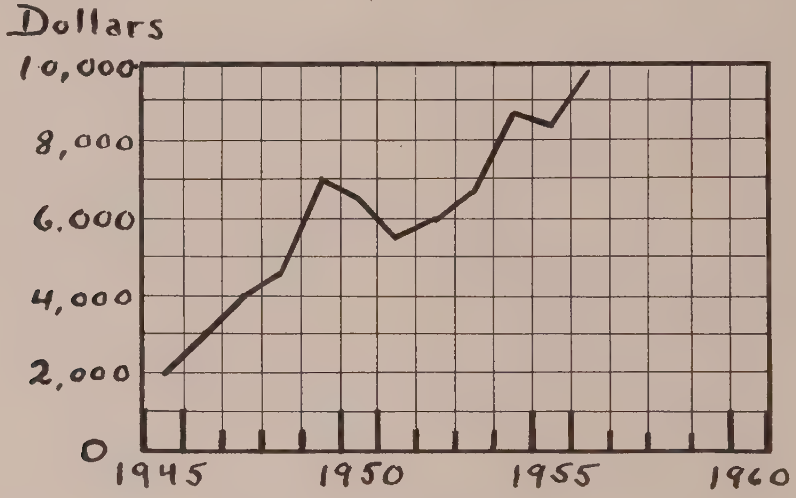
How much time each space represents is shown by the **horizontal scale.** It is always marked to show you that one space represents a year, for example, or a day, or a week, or a month.

Each vertical space represents some fixed quantity or value - $1,000 per space, for example. The **vertical scale** tells you what each vertical space represents. The vertical scale should always be marked to show you what is represented - dollars, percent, tons, bushels, or what.

The bottom line of an arithmetic chart should ordinarily represent zero.

Let's plot the annual sales of widgets for the past twelve years. They are as follows:

1945--2,000
1946--3,000
1947--4,000
1948--4,600
1949--7,000
1950--6,500
1951--5,500
1952--6,000
1953--6,700
1954--8,700
1955--8,300
1956--9,900



Sale of Widgets

Note: (1) the chart has a title - Sales of Widgets; (2) the scales are chosen so that the proportions are pleasant and easy to grasp--the chart is neither too compressed or too spread out, either horizontally or vertically; (3) the horizontal scale is clearly indicated--one space equals one year, the lines mark the intervals between years; (4) the vertical scale is clearly indicated--one space equals 1,000; (5) the vertical scale is labeled - it represents dollars; (6) the bottom line of the chart represents zero; (7) the points are plotted horizontally in the middle of the space, because in this chart the space *represents* the whole year, the lines the end of the year; (8) the points are plotted vertically in proportion to dollar value—for example, the value for 1948 being 4,600 is plotted 6/10 of the way from 4,000 to 5,000; (9) the work is neat.

Now, keeping these points in mind, plot your monthly figures on the blank paper on page 85, your annual or weekly or daily figures on the blank paper on page 84.

THE MODIFIED GEISINGER INDICATOR

THE Modified Geisinger Indicator is a curve which tends to turn up or turn down several (usually about 8) months *in advance* of the Federal Reserve Board's Index of Industrial Production. It thus has a certain amount of forecasting value.

A "curve" is a line connecting successive points on a chart. The points we are talking about here are the month-by-month values of the Indicator. A "curve" as the word is used in statistics can be jagged, and for that matter it usually is.

The Federal Reserve Board's Index of Industrial Production is a measure of the *physical* production of the United States. It is a weighted average of the pounds, sacks, square yards, gallons, tons, etc. produced by industry. It is perhaps the best index of general business that we have. It has *nothing* to do with stock prices.

The Modified Geisinger Indicator has nothing to do with cycles. I print it for you because it takes but little space and may help you.

As I have told you, the Modified Geisinger Indicator is a blend of two indicators. One is an indicator devised by Wm. R. Geisinger. Its components and method of computation cannot be revealed. Mr. Geisinger lets me print it because he wants to help the Foundation and because he hopes that some of you who are on the fence about renewing may decide to renew because of it. It's his way to help the study of cycles.

The other Indicator is a First Difference Indicator. First Difference Indicators are nothing new. They work for series of figures like the F. R. B. Index because for such indexes the *amount of change* slacks off before the *index itself* slacks off, and vice versa.

Let me illustrate: In the first column below is a series of figures representing the month-by-month sales of widgets. The second column shows the *change* in the sale of widgets from one month to the next. These changes are sometimes called "first differences." Another name for the values in Col. B is "one-month moving difference."

SALES OF WIDGETS

	A	B
Month	Sales	1-Month Moving Difference
Dec. '44	85	-
Jan. '45	90	+ 5
Feb.	100	+10
Mar.	115	+15
Apr.	135	+20
May	160	+25
June	190	+30
July	215	+25
Aug.	235	+20
Sept.	250	+15
Oct.	260	+10
Nov.	265	+ 5
Dec.	265	0
Jan. '46	260	- 5
Feb.	250	-10
Mar.	235	-15
Apr.	215	-20
May	190	-25
June	160	-30
July	135	-25
Aug.	115	-20
Sept.	100	-15
Oct.	90	-10
Nov.	85	- 5
Dec.	85	0
Jan. '47	90	+ 5
Feb.	100	+10
Mar.	115	+15
Apr.	135	+20
May	160	+25
June	190	+30
July	215	+25

Each figure in Col. B is the difference between the corresponding figure in Col. A and the previous figure in Col. A. Thus, the value of +5 for January 1945 is 90 minus 85. It signifies that sales of widgets in January 1945 were five more than for December 1944. And so on. As January 1946 is *down* from December 1945 the difference is negative one, -5.

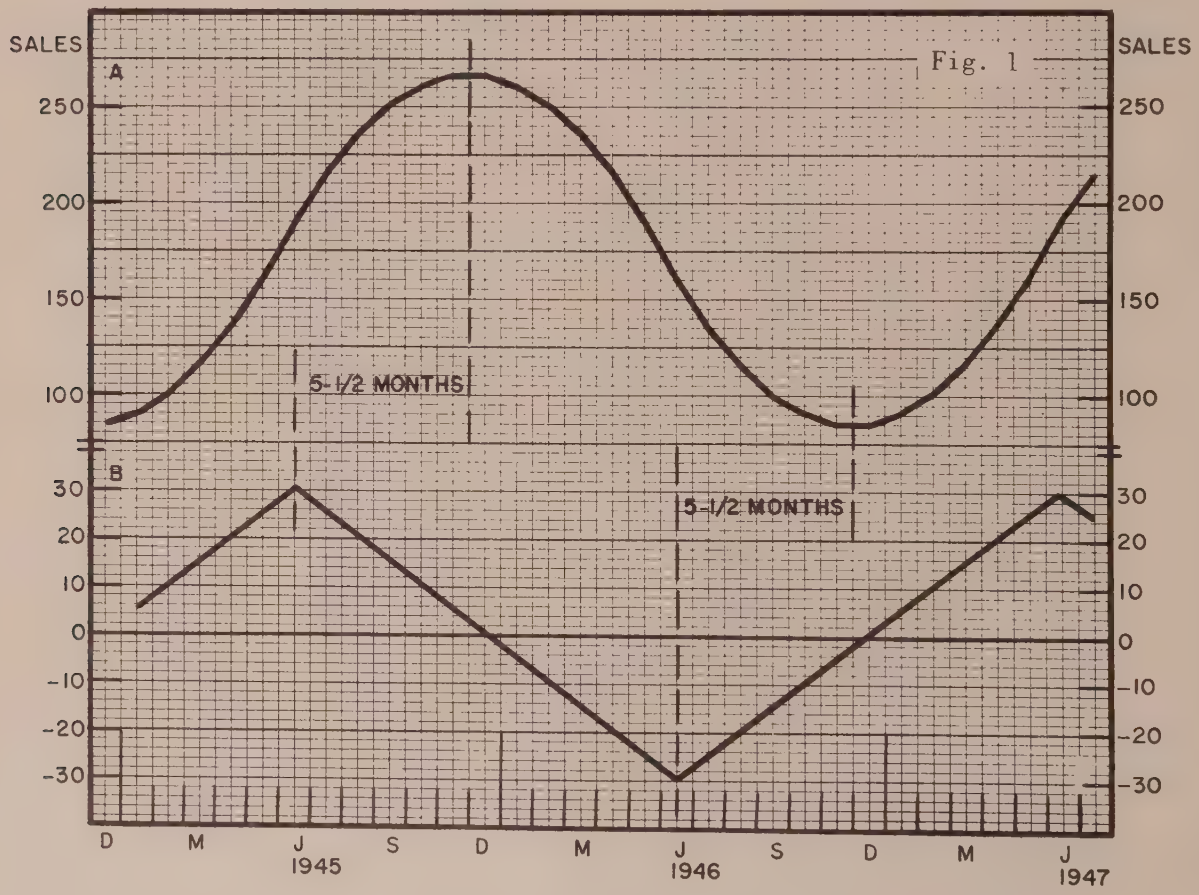
As you can see (Col. A), sales start in December 1944 with a value of 85. They go up until November 1945. Sales for December 1945 are the same as for November 1945. Sales then go down until November 1946. Sales for December 1946 are the same as for November 1945. Sales then start up, and so on.

Note however that the 1-month moving difference values (Col. B) reach *their* peak in June of 1945, 5½ months before the peak in Col. A. Similarly Col. B figures are at a trough in June of 1946, 5½ months ahead of the trough of the sales figure, Col. A, which comes halfway between Nov. '46 and Dec. '46

The relationship may be clearer if I chart the figures of Col. A and Col. B as in Fig. 1 below.

First Difference Indicators are sometimes called rate-of-change indicators. This term is properly applied when the *percentage* increase or decrease of successive time intervals is used instead of the difference.

Of course First Differences Indicators can be computed for any series of figures. They work on curves like the F. R. B. Index that tend to turn over gradually. As a rule they don't work on price series like the stock market where the ups and downs are likely to be abrupt, unless you smooth the figures.



To make the First Difference Indicator work better for the F. R. B. Index I smoothed the F. R. B. Index, first by a 3-month moving average and then by a 2-month moving average, before taking the difference.

You might like to see the arithmetic. It is printed in the table below.
Lines 1, 2, and 3 of Col. A are averaged to get line 2 of Col. B; lines 2, 3, and 4 of Col. A are averaged to get line 3 of Col. B; and so on.

Lines 2 and 3 of Col. B are averaged to get line 3 of Col. C; lines 3 and 4 of Col. E are averaged to get line 4 of Col. C; etc.

Line 3 of Col. C is subtracted from line 4 of Col. C to get line 4 of Col. D; line 4 of Col. C is subtracted from line 5 of Col. C to get line 5 of Col. D; and so on.

The values in Col. 3 are the ones I combine with the Geisinger Indicator to produce the Modified Geisinger Indicator.

As I have told you, it isn't possible to compute the Geisinger Indicator itself very far back. Therefore the Modified Geisinger Indicator can't be computed very far back either.

On the other hand the First Difference Indicator for the Federal Reserve Board Index can be computed back through 1920. I have had these computations made for you. They are charted on pages 80, 81, 82, and 83. They show you the extent to which, for 38 years past, the First Difference Indicator has preceded rises or falls in the Federal Reserve Index itself. It seems to me the record is helpful, on the whole.

Some of our members have asked to have each part of the Modified Geisinger Indicator shown separately. I'm showing it for you this way this time, on pages 86 and 87. On those pages Curve A shows Mr. Geisinger's own index, the real Geisinger Indicator. Curve B shows the First Difference Indicator. Curve C shows the sum of the two--this is the indicator I have been printing for you under the name "*Modified* Geisinger Indicator." Curve D shows the Federal Reserve Index of Industrial Production, seasonally adjusted, smoothed by a 3-month moving average. Curve E shows the Modified Geisinger Indicator advanced by eight months.

COMPUTATION OF THE ONE-MONTH MOVING DIFFERENCE INDICATOR

		A	B	C	D
Line	Date	F.R.B. Index	3-Month Moving Average Centered	2-Month Moving Average of Col. B, Posted to Second Month	1-Month Moving Difference
1	Aug. '56	142	*	*	*
2	Sept	145	144.33	*	*
3	Oct.	146	145.66	145.00	*
4	Nov.	146	146.33	146.00	1.00
5	Dec.	147	**	**	**

* To get these figures we need to extend Col. A backwards.
** To get these figures we must have Col. A values for January.

THE FORECAST

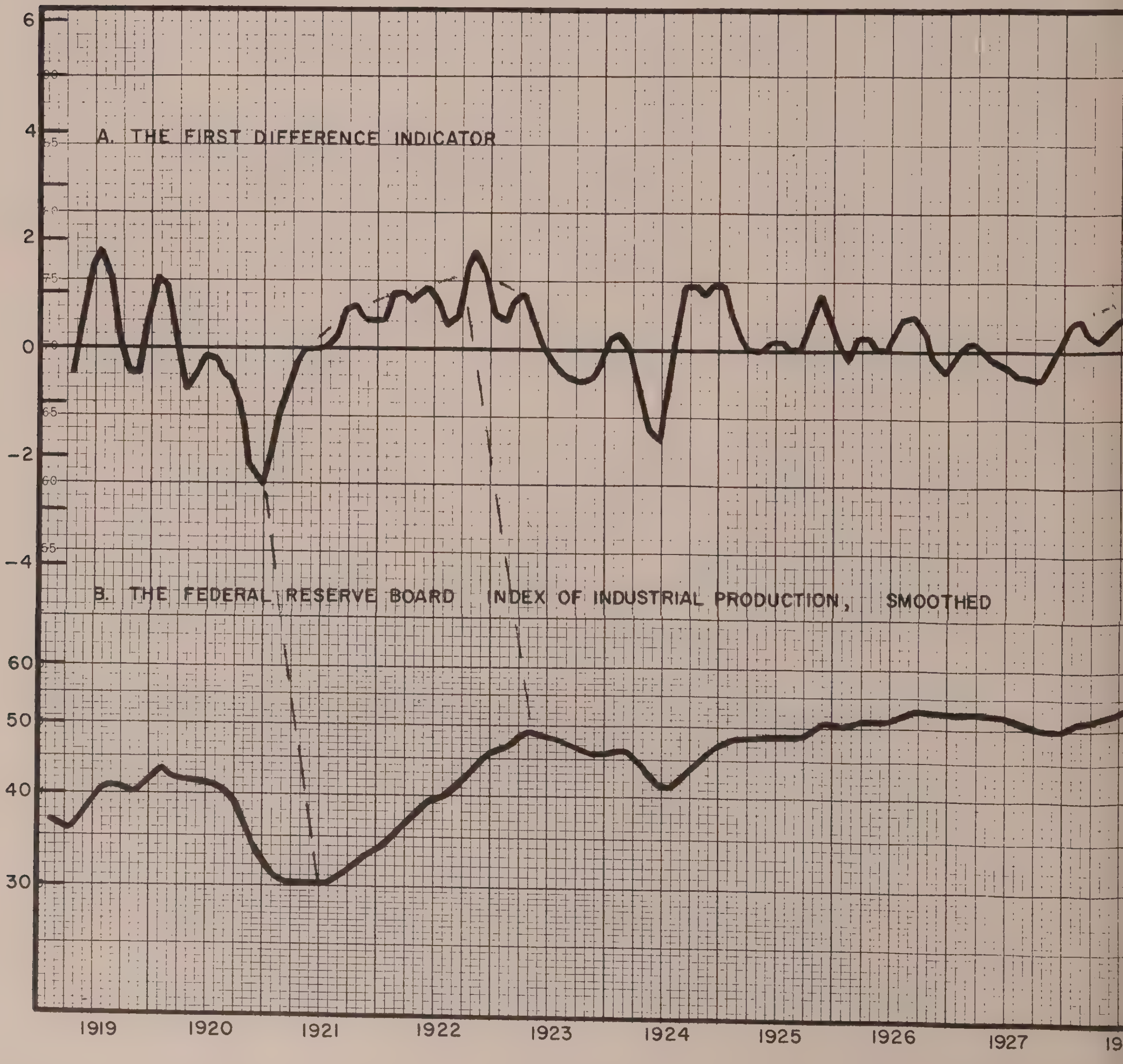
The Modified Geisinger Indicator for October 1956 (June 1957 when advanced) is +1.53. This is down somewhat from the figure of +2.13 (revised) for September 1956 (May 1957 when advanced).

My guess is that the value of the Modified Geisinger Indicator for November 1956 (July 1957 when advanced) will be down further to about -.6.

The Federal Reserve Index of Industrial Production, seasonally adjusted is also down. The value for December 1956 was 147; the value for January is 146.

See chart on inside back cover.

As you know, the Modified Geisinger Indicator is a blend of two indicators -



the Geisinger Indicator and a First Difference Indicator. Some of you want the figures for each indicator separately. These values are as follows:

	Geisinger Indicator	First Difference Indicator	Modified Geisinger Indicator
Sept. 1956	-.2	2.33	2.13
Oct. 1956	-.8	2.33	1.53
Nov. 1956	*	1.	*
Dec. 1956	*	.33	*

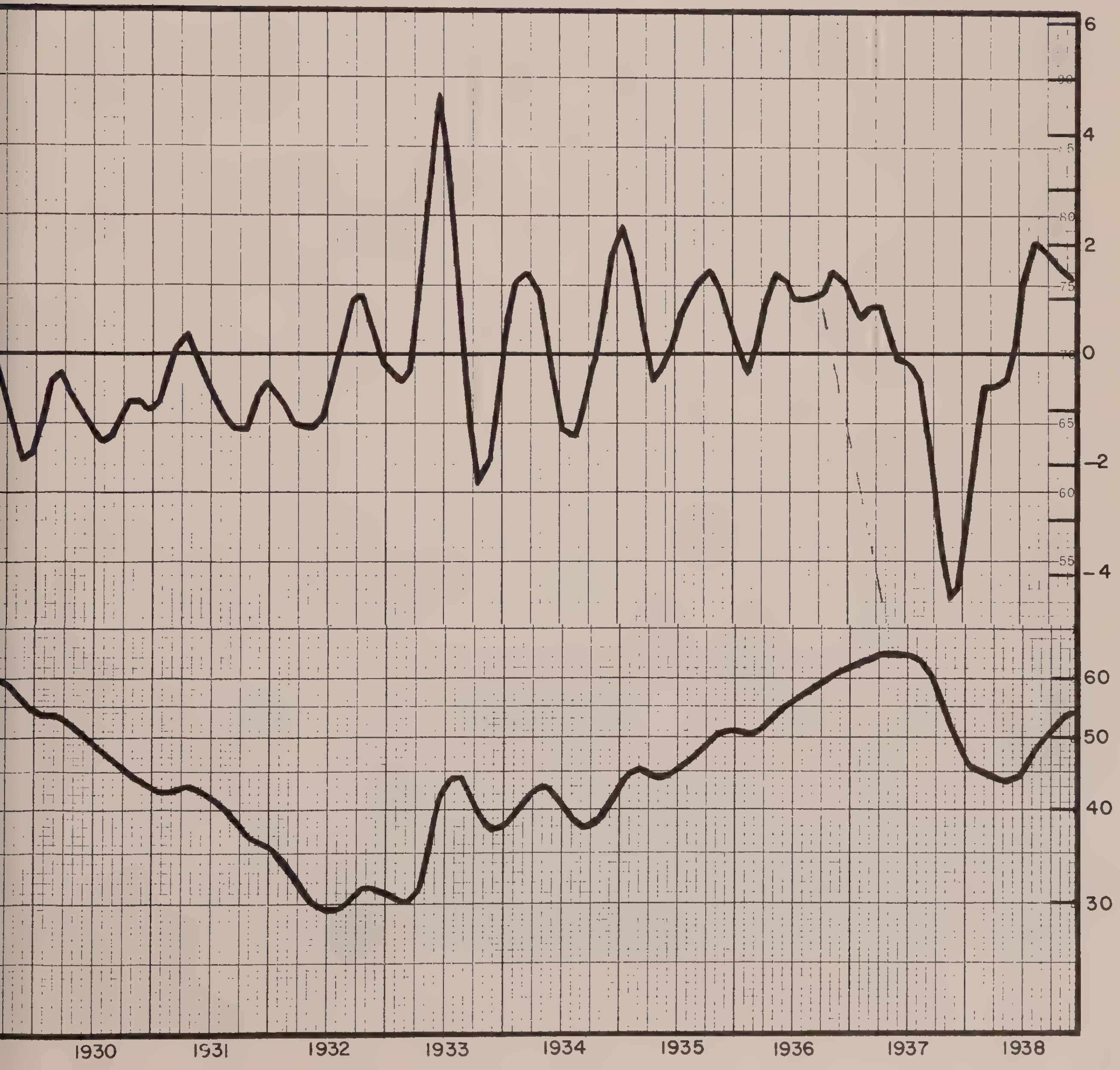
*Not yet available

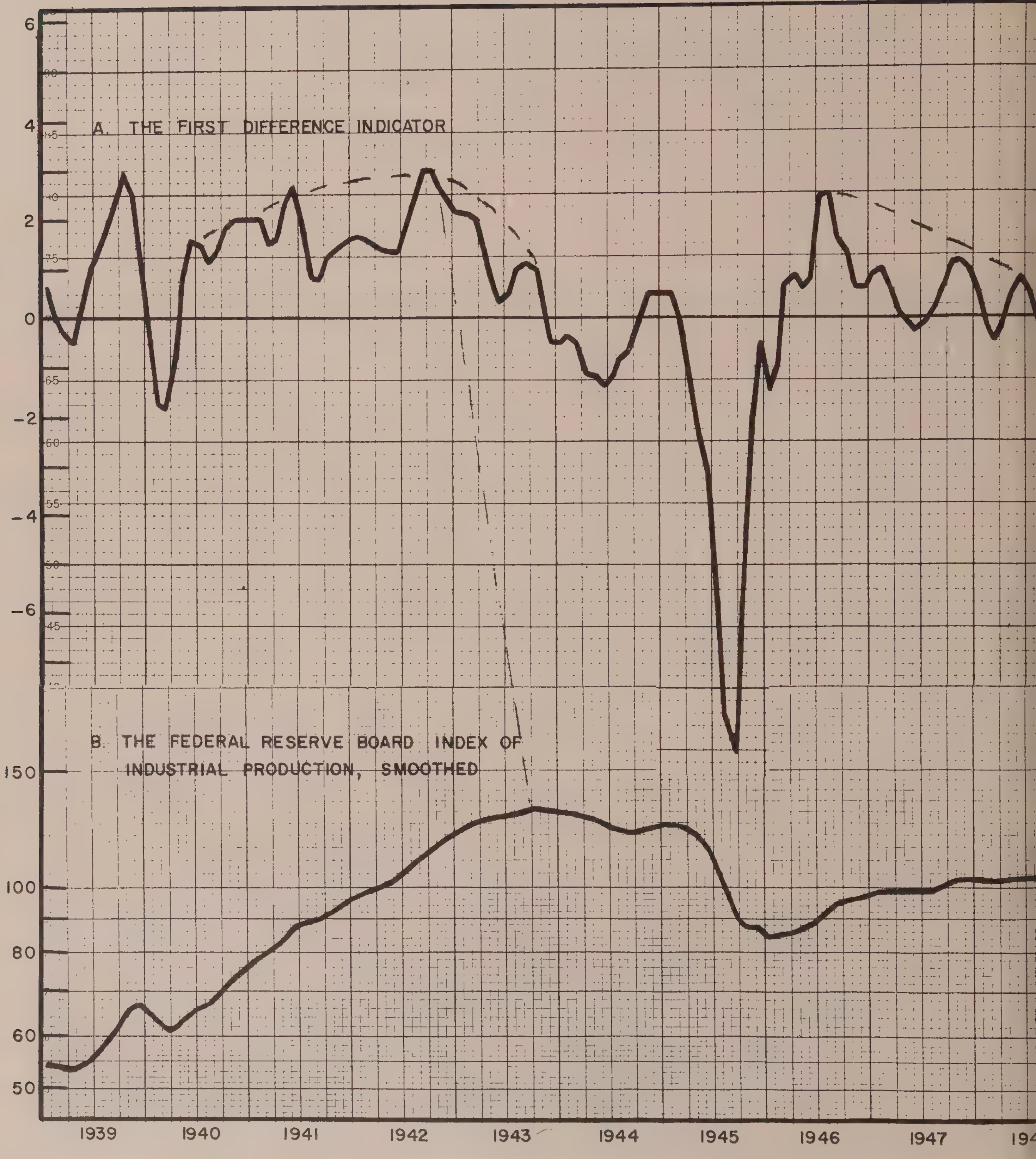
Neither indicator is favorable at the present time. On the other hand neither indicator, as yet, suggests cause for alarm. Both indicators suggest a cautious wait and see attitude.

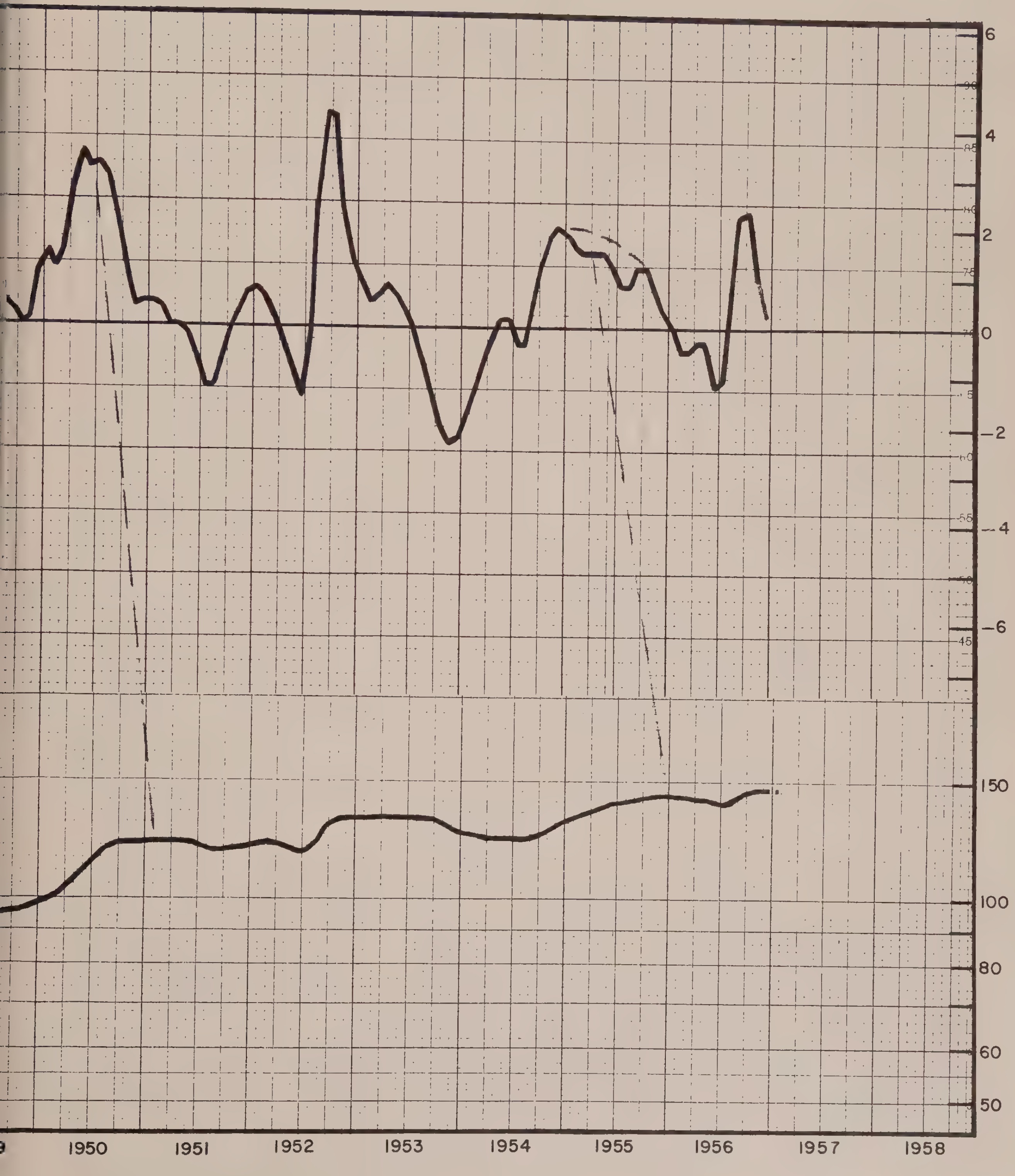
Remember, these indicators apply only to physical production in the United States; they have nothing to do with stock prices.

E. R. Dewey

February 26, 1957




A. THE FIRST DIFFERENCE INDICATOR
B. THE FEDERAL RESERVE BOARD INDEX OF INDUSTRIAL PRODUCTION, SMOOTHED
6
4
2
0
-2
-4
-6
150
100
80
60
50
1939
1940
1941
1942
1943
1944
1945
1946
1947


6
4
2
0
−2
−4
−6
150
100
80
60
50
1950
1951
1952
1953
1954
1955
1956
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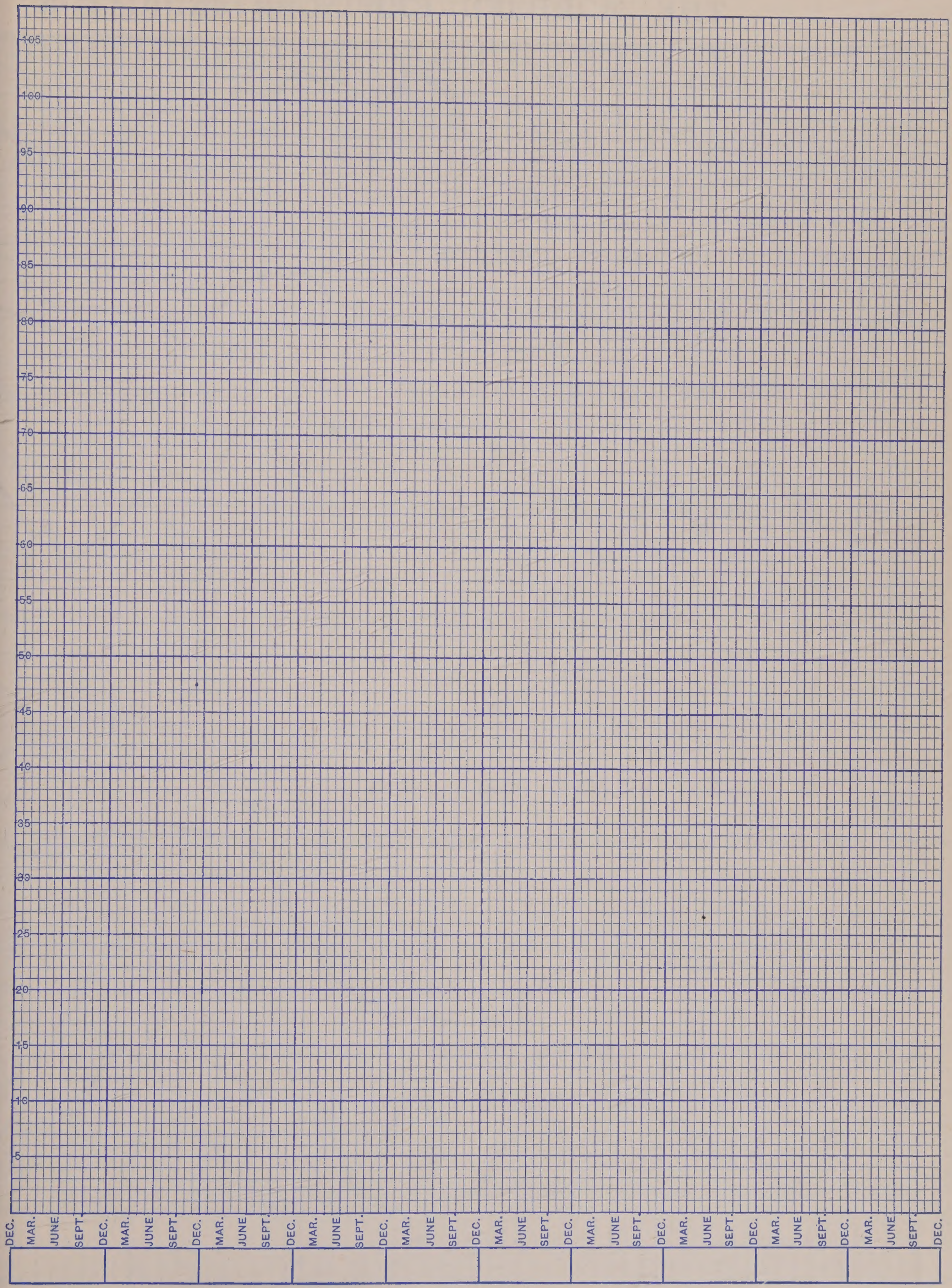
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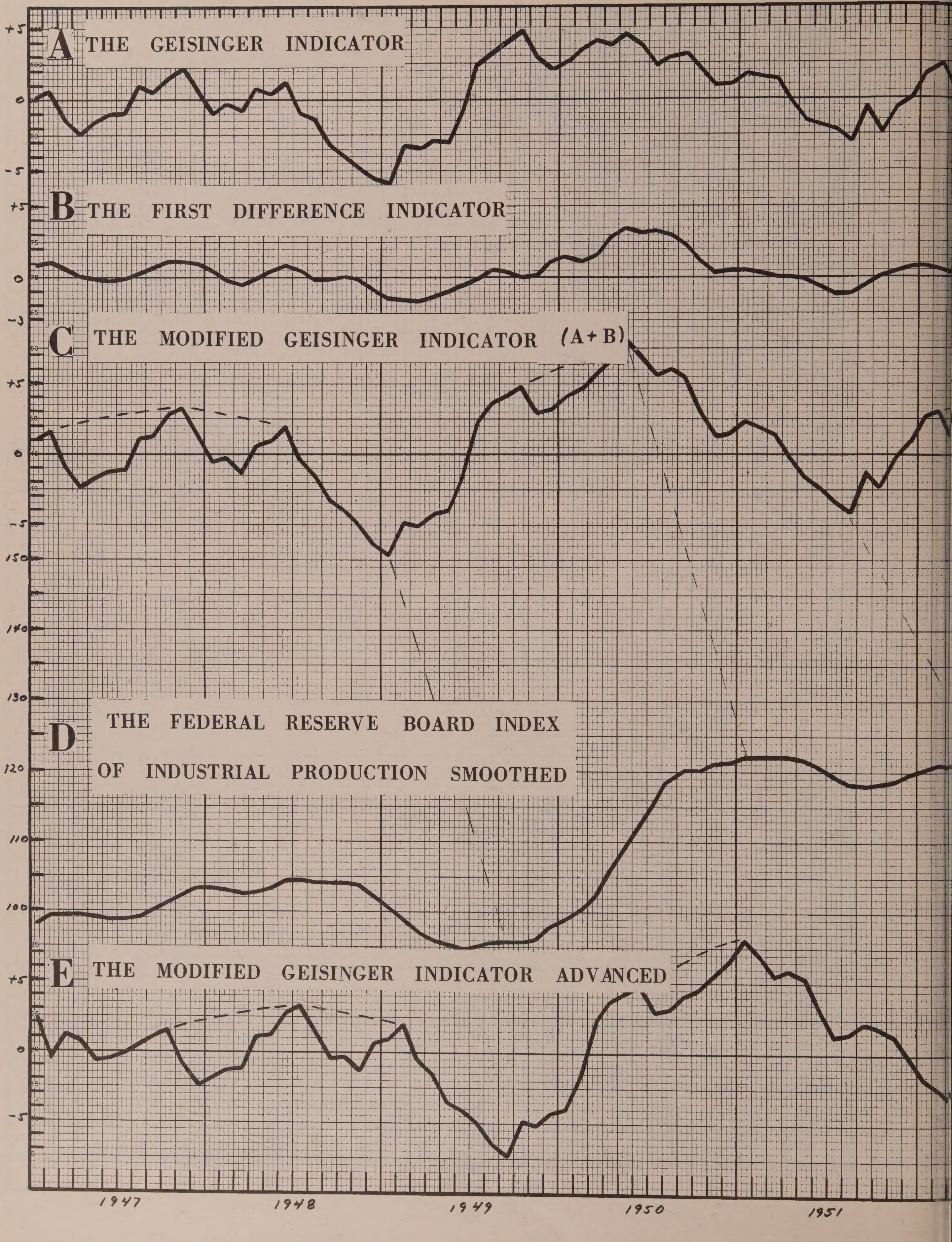

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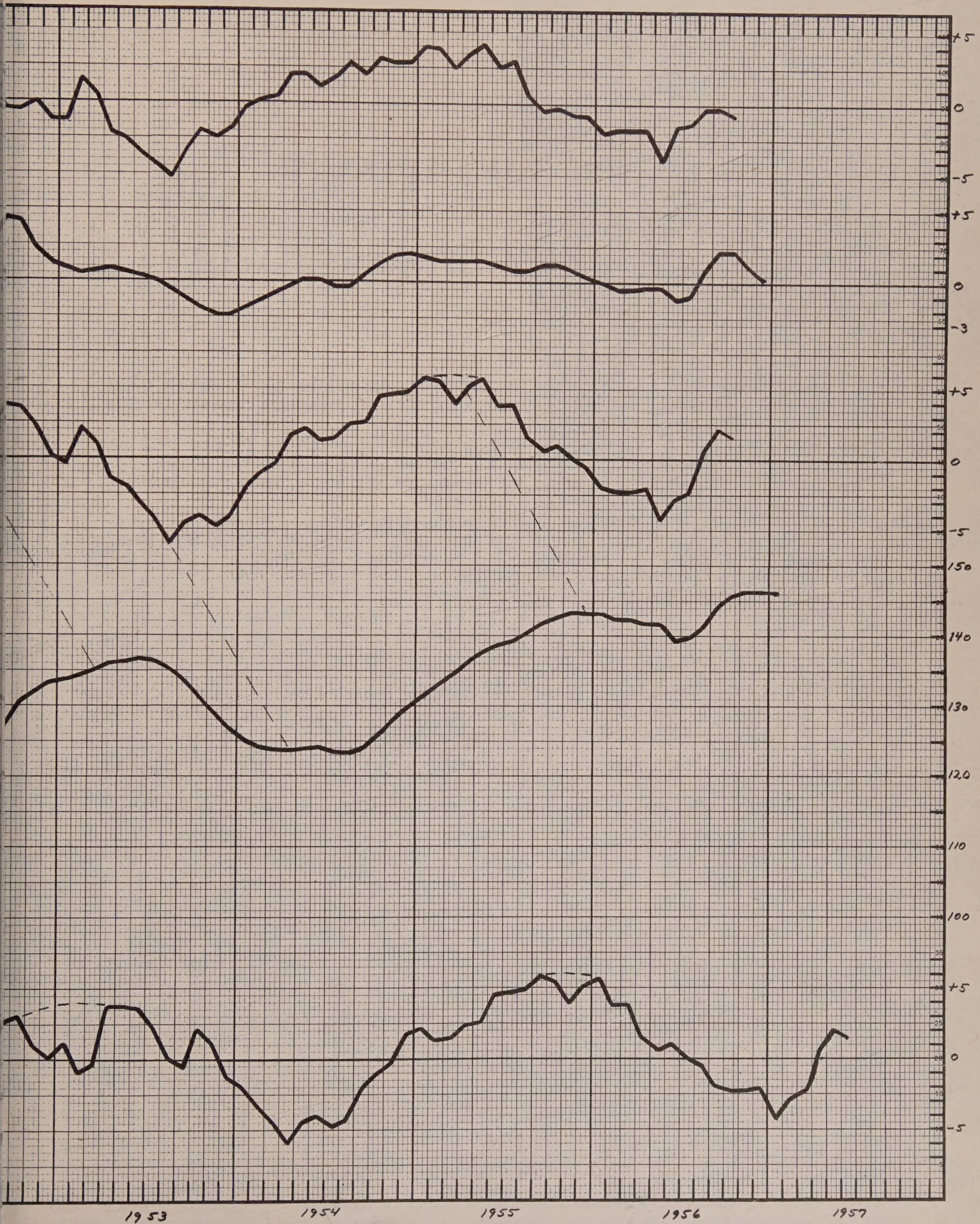

Turn to pages 80 and 81 for the forecast.

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